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REMARKS

This response is intended as a full and complete response to the final Office Action mailed March 25, 2005. In the Office Action, the Examiner notes that claims 1-19 are pending, of which claims 1-19 are rejected. All claims remain unchanged by this response.

In view of the following discussion, Applicants submit that none of the claims now pending in the application are anticipated under the provisions of 35 U.S.C. §102. Thus, Applicants believe that all of these claims are now in allowable form.

REJECTIONS

35 U.S.C. §102

Claims 1-19

The Examiner has rejected claims 1-19 under 35 U.S.C. §102(e) as being anticipated by Lumelsky et al. (U.S. Patent 6,377,996, hereinafter "Lumelsky"). Applicants respectfully traverse the rejection.

The Examiner alleges that in claims 1, 15 and 17, Lumelsky discloses method and apparatus for migrating a user including all aspects of Applicants' invention. The Applicants respectfully disagree.

"Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim" (Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co., 730 F.2d 1452, 221 U.S.P.Q. 481, 485 (Fed. Cir. 1984)(citing Connell v. Sears, Roebuck & Co., 722 F.2d 1542, 220 U.S.P.Q. 193 (Fed. Cir. 1983)) (emphasis added). The Lumelsky reference fails to disclose each and every element of the claimed invention, as arranged in the claim.

Independent claims 1, 15 and 17 specifically recite:

1. "A method for migrating a user from a source server module providing a content stream to said user, said content stream divided into a plurality of extents, said method comprising the steps of:
 - determining, for said content stream being provided to said user, a transitional extent defining an appropriate first extent to be provided to said user via a destination server module;
 - determining if said destination server module is capable of providing said transitional extent to said user within a first time period; and

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causing said destination server module to provide said transitional extent and subsequent extents associated with said content stream to said user." (emphasis added).

15. "A method for receiving a migrated user, comprising:
receiving a transitional extent identifier, an extent deadline and a content identifier;
determining if the identified transitional extent of the identified content may be accessed prior to said extent deadline; and
in the event of a favorable determination, accessing said transitional extent and providing a message indicative of acceptance of said user." (emphasis added).

17. "Apparatus, comprising:
a plurality of server modules, each of said server modules having associated with it a respective mass storage device for storing content as respective sequences of extents;
a switch, for coupling content streams provided by said server modules to a transport processors, each of said transport processor, wherein
at least one content stream being provided to a user by a first server module is caused to be provided to said user by a second server module, an initial portion of said content stream provided by said second server module being defined by a transition;
said first and second server modules cooperating to define a transitional extent representing a first extent of said content stream to be provided by said second server module;
in the case of a migration event, at least one content stream provided by a source server module, said failing server module are migrated to a non-failing server module such that subscribers receiving said content streams receive substantially uninterrupted service."
(emphasis added).

The specification specifically recites on page 7, lines 27 to page 8, line 6:

Each server module 220 (within the information server 125) includes a respective buffer. Each buffer memory is capable of holding at least one service period (i.e., one extent) worth of information retrieved from a disk array 110 via the respective server module 220. Each buffer 225 is coupled to a switch 230.

The switch 230 operates to multiplex the contents of each buffer 225 in a round robin fashion to produce an output stream OUT that is coupled to the transport processor 150 for subsequent transport to the appropriate subscribers 106 via the forward application transport channel (FATC) supported by the distribution network 140. The exemplary embodiment uses a service period of two seconds. Thus, each extent

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retrieved from a single disk within a disk array 210 comprises two seconds worth of information, illustratively, video information and associated audio information. (see Applicants' specification, page 7, lines 27-31 and page 8, lines 11-18, and Figures 2, and 3A and 3B).

The Applicants in the specification further discloses on page 14, line 11 to 23:

At step 410, a transitional extent deadline is determined. That is, at step 410 an extent temporally following the presently accessed extent is defined as the transitional extent. The transitional extent is the first extent to be streamed to the user by the destination server module during a user migration. Thus, the transition extent is selected such that sufficient time between the present time and the transitional extent deadline is provided to allow such a transition to occur. However, depending upon the nature of the user migration event, that time may be required to be very short to avoid significant degradation or, in fact, termination of user streams. Thus, where a user migration event threatens to disrupt user streams in the very near future, the transition extent is preferably selected to be the extent as soon after the presently accessed extent which will likely allow sufficient time to effect a successful user migration to the destination server module.

It is clear from at least the portion of the Applicants' Specification depicted above that the invention of the Applicants is directed, at least in part to migrating user from a source server module providing a content stream to a destination server module, said content stream is divided into service periods (extents), wherein at least one service period is defined as a transitional extent. Specifically, an extent temporarily following the presently access extent may be defined as the transitional extent. The transitional extent is the first service period to be streamed to the user by the destination server module during a user migration.

The Applicants respectfully submits that, in contrast to the Applicants' invention, there is absolutely no teaching, suggestion or disclosure in Lumelsky for defining the transitional extent for migrating a user's content stream. In particular, the Lumelsky reference discloses:

"To migrate a client and its streaming session, AS1 710 signals the selected target server PS2 700 with a hand-off request message 740. The hand-off request message 740 contains the unique identifier of the hand-off request, the unique identifier of the stream, the current segmentation marker on this stream, the unique identifier of the client, the

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target segmentation marker, etc. These identifiers are found in all messages of the switching protocol."

The segmentation markers as disclosed in the Lumelsky reference are inserted into each of the content streams prior to the streaming and after the encoding of the content. Specifically,

"Segmentation markers, to be identified by the client, are overlayed over a stream at precise locations. The placement of segmentation markers within a stream is content independent. According to one aspect of the present invention, the placement of segmentation markers is based on a globally known constraint, such as every L number of bytes of original data."

"In the preferred embodiment, this is accomplished prior to the decoding of the stream through the steps of:

- a) inserting segmentation markers into a stream prior to the streaming and after the encoding;
- b) exchanging information between switching parties in terms of segmentation markers during a seamless switch; and
- c) identifying, locating, and removing these segmentation markers in any such stream at the client."

(see Lumelsky, column 11, lines 33-40, column 8, lines 4-23, and Figures 4-6).

It is clearly evident from the disclosure of Lumelsky that there is absolutely no teaching, suggestion or disclosure for a migrating method or apparatus for determining "a transitional extent defining an appropriate first extent to be provided to the user via a destination server module." More specifically, Lumelsky discloses a hand-off message informing the target servers with a control message. Markers are inserting into the content stream which are used by the target server to schedule the switch and allow for the client to continue receiving the content stream without too much interruption. There is absolutely no suggestion, teaching or disclosure that any of the markers of Lumelsky are transitional extent. The markers do not include video and associated audio information retrieved from a disk array. Markers consist of parameters and control information while transitional extent is a service period with user's video and audio information. Thus, markers do not anticipate transitional extents.

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Nowhere in the Lumelsky reference is there any teaching, or even suggestion of a transitional extent, as defined by the Applicants' invention. That is, nowhere is there any teaching or even suggestion of "a transitional extent defining an appropriate first extent to be provided to said user via a destination server module." Rather, the Lumelsky reference merely discloses segmentation markers that are inserted into a stream to assist in migrating a client and in streaming session. Accordingly, since the Lumelsky reference fails to teach a transitional extent defining an appropriate first extent to be provided to said user via a destination server module, the Lumelsky reference fails to teach each and every element of the claimed invention, as arranged in the claim.

As such, Applicants submit that independent claims 1, 15 and 17 are not anticipated and fully satisfy the requirements of 35 U.S.C. §102 and are patentable thereunder. Furthermore, claims 2-14, 16, 18 and 19 depend, either directly or indirectly, from independent claims 1, 15 and 17 and recite additional features thereof. As such and at least for the same reasons as discussed above, the Applicants submit that these dependent claims are also not anticipated and fully satisfy the requirements of 35 U.S.C. §102 and are patentable thereunder. Therefore, the Applicants respectfully request that the Examiner's rejections be withdrawn.

CONCLUSION

Thus, Applicants submit that all of the claims presently in the application, are not anticipated and patentable under the provisions of 35 U.S.C. §102. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

If, however, the Examiner believes that there are any unresolved issues requiring adverse final action in any of the claims now pending in the application, it is requested

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that the Examiner telephone Eamon J. Wall, Esq. at (732) 530-9404 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

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